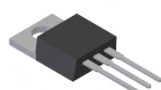


Features

- Ultra Low Forward Voltage Drop
- Excellent High Temperature Stability
- Patented Super Barrier Rectifier Technology
- Soft, Fast Switching Capability
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Also Available in Green Molding Compound**
 - **Halogen and Antimony Free. "Green" Device (Note 3)**

Mechanical Data

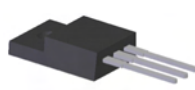
- Case: TO-220AB, ITO-220AB, D²Pak
- Case Material: Molded Plastic, UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin Finish annealed over Copper leadframe. Solderable per MIL-STD-202, Method 208 ⁽³⁾
- Weight: TO-220AB – 1.85 grams (approximate)
ITO-220AB – 1.65 grams (approximate)
D²Pak – 2.1 grams (approximate)



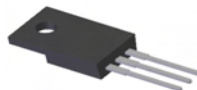
TO-220AB
Top View



TO-220AB
Bottom View



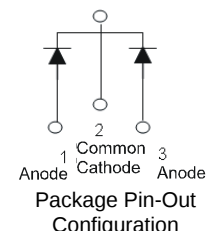
ITO-220AB
Top View



ITO-220AB
Bottom View



D²Pak
Top View

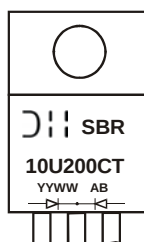


Ordering Information (Notes 4 and 5)

	Part Number	Case	Packaging
	SBR10U200CT	TO-220AB	50 pieces/tube
	SBR10U200CT-G	TO-220AB	50 pieces/tube
	SBR10U200CTFP	ITO-220AB	50 pieces/tube
	SBR10U200CTFP-G	ITO-220AB	50 pieces/tube
	SBR10U200CTFP-JT	ITO-220AB (Alternate)	50 pieces/tube
	SBR10U200CTB	D ² Pak	50 pieces/tube
	SBR10U200CTB-G	D ² Pak	50 pieces/tube
	SBR10U200CTB-13	D ² Pak	800/Tape & Reel
	SBR10U200CTB-13-G	D ² Pak	800/Tape & Reel

- Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
 2. See <http://www.diodes.com> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
 4. For Green Molding Compound version part numbers, add "-G" suffix to part number above. Examples: SBR10U200CTB-G.
 5. For packaging details, go to our website at <http://www.diodes.com>.

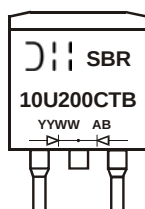
Marking Information



SBR10U200CT = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 06 = 2006)
WW = Week (01 - 53)



SBR10U200CTFP = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 06 = 2006)
WW = Week (01 - 53)



SBR10U200CTB = Product Type Marking Code
AB = Foundry and Assembly Code
YYWW = Date Code Marking
YY = Last two digits of year (ex: 06 = 2006)
WW = Week (01 - 53)

Maximum Ratings (Per Leg) @T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitance load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _{RM}	200	V
Average Rectified Output Current (Per Leg) (Total)	I _O	5 10	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	150	A
Peak Repetitive Reverse Surge Current (2μS-1KHz)	I _{RRM}	3	A
Isolation Voltage (ITO-220AB Only) From terminal to heatsink t = 3 sec.	V _{AC}	2000	V

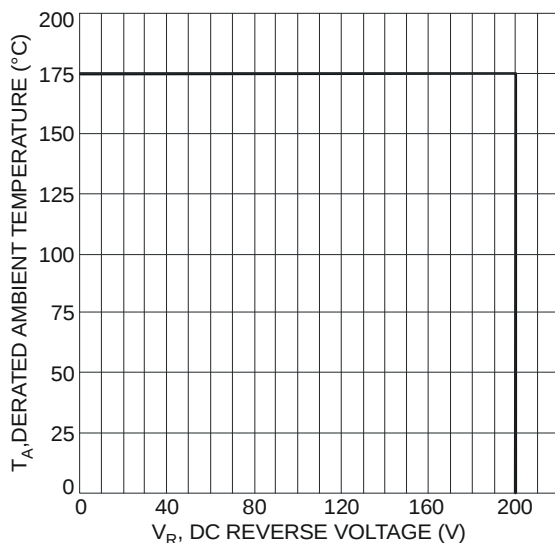
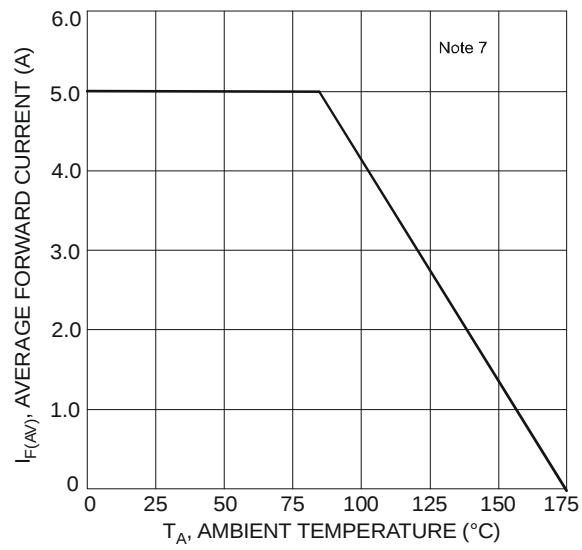
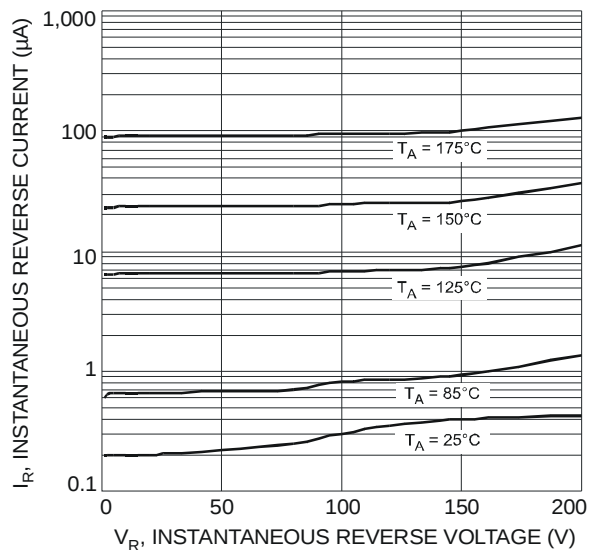
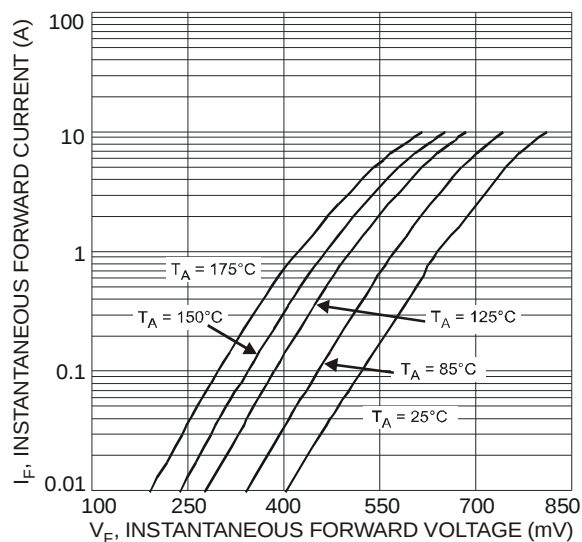
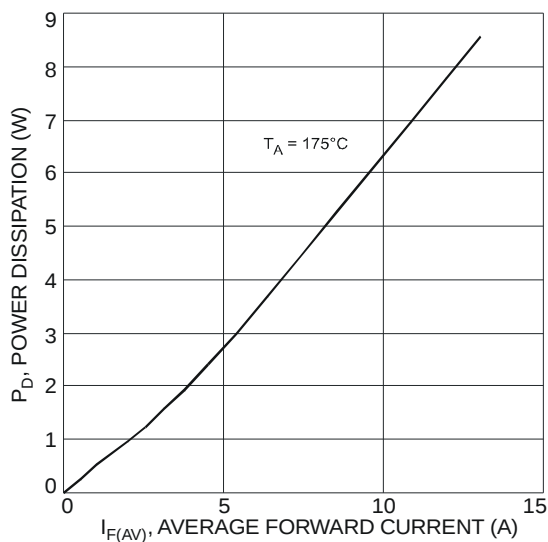
Thermal Characteristics (Per Leg)

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance Package = TO-220AB & D ² Pak Package = ITO-220AB	R _{θJC}	2 4	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +175	°C

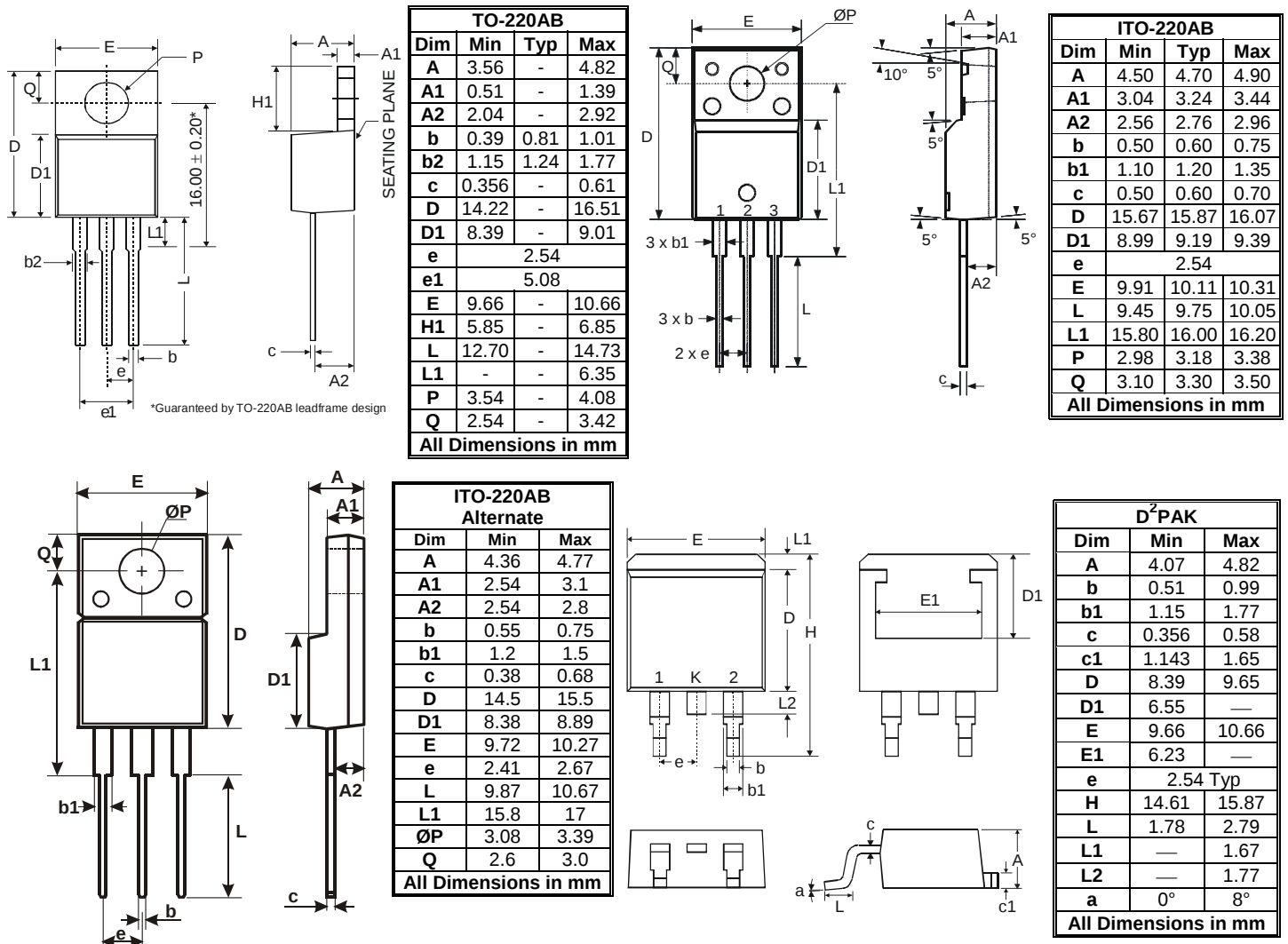
Electrical Characteristics (Per Leg) @T_A = 25°C unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage Drop	V _F	-	- 0.60 -	0.82 0.65 0.88	V	I _F = 5A, T _J = 25°C I _F = 5A, T _J = 125°C I _F = 10A, T _J = 25°C
Leakage Current (Note 6)	I _R	-	-	0.2 25	mA	V _R = 200V, T _J = 25°C V _R = 200V, T _J = 125°C
Reverse Recovery Time	t _{rr}	- -	24 20	30 25	ns	I _F = 0.5A, I _R = 1A, I _{RR} = 0.25A I _F = 1A, V _R = 30V, di/dt = 100A/μS, T _J = 25°C

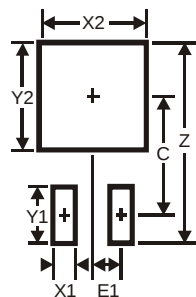
Notes: 6. Short duration pulse test used to minimize self-heating effect.
 7. Using heatsink (by Black Aluminum 45mm * 20mm * 12mm)



Package Outline Dimensions



Suggested Pad Layout



Dimensions	Value (in mm)
Z	16.9
X1	1.1
X2	10.8
Y1	3.5
Y2	11.4
C	9.5
E1	2.5

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

B. A critical component is any component in a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or to affect its safety or effectiveness.

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